

**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## In re Reissue Application of

Duane Charles GATES

Serial No. 09/534,814

(Reissue application of  
U.S. Patent 5,731,565)



Group Art Unit: 3742

**Examiner:**

Filed: March 22, 2000

For: SEGMENTED COIL FOR GENERATING PLASMA  
IN PLASMA PROCESSING EQUIPMENT

## COMBINED DECLARATION AND POWER OF ATTORNEY IN REISSUE APPLICATION

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

As a below-named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name; and

that

I verily believe that I am the original and first inventor of the invention entitled SEGMENTED COIL FOR GENERATING PLASMA IN PLASMA PROCESSING EQUIPMENT, described and claimed in the Reissue Application filed March 22, 2000; that I understand the content of the specification filed therein; that I have reviewed and understand the content of the specification including the claims, as well as the claims referred to in this Declaration; that I do not

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know and do not believe the same was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to July 27, 1995; that the same was not in public use or on sale in the United States of America more than one year prior to July 27, 1995; that the invention has not been patented or made the subject of an inventor's certificate issued before July 27, 1995, in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior July 27, 1995; that I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application; and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to the original application Serial No. 08/507,971 by me or my legal representatives or assigns. My original U.S. Patent 5,731,565, issued March 24, 1998, which matured from Serial No. 08/507,971 filed July 27, 1995, is believed to be wholly or partly inoperative because I claimed less than I had a right to claim through error and without any deceptive intention. Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicants.

The errors include the following:

1. The failure to claim the subject matter of claims 39–56 of the Reissue Application. In particular, the failure to include a claim of the scope defined by independent claim 39, upon which claims 40–44 depend, that the interior and peripheral coil portions have turns connected to each and arranged so the magnet flux density coupled to the plasma by the interior and peripheral coil portions exceeds the magnetic flux coupled to the plasma by the intermediate coil portion.

2. The error also includes the failure to include a claim of the scope defined by independent claim 45, upon which claims 46–50 depend, that the intermediate and peripheral portions of the coil have turns connected to each other and arranged so the magnetic flux density coupled to the plasma by each of the interior and peripheral coil portions exceeds the magnetic flux density coupled to the plasma by an intermediate coil portion.

3. The error also includes the failure to include a claim of the scope defined by independent claim 51, upon which claims 52 and 53 depend, that the interior coil portion include (1) plural radially and circumferentially extending turns, (2) an exterior coil portion having at least one circumferentially extending turn, and (3) an intermediate coil portion configured so it (a) does not include a complete turn, (b) is substantially less than a complete turn, and (c) includes a lead connected to ends of the interior and exterior portions.

4. The error also includes the failure to include a claim of the scope defined by independent claim 54, upon which claims 55 and 56 depend, that an intermediate coil portion be configured so (1) it does not include a complete turn, (2) is substantially less than a complete turn, and (3) includes a lead connected to the ends of the turns of the interior and exterior portions.

5. The error also includes the failure to include the foregoing features of the independent claims in various combinations. For example, claim 40 requires the interior coil portion to include radially and circumferentially extending turns, and the exterior segments to have at least one circumferentially extending turn. The intermediate portion is configured so it (a) does not include a complete turn, (b) is substantially less than a complete turn, and (c) includes a lead connected to ends of the turns of the interior and exterior portions. Similar limitations to those set forth in claim 40 are set forth in claim 46, which depends on claim 45.

6. The error also includes the failure to include claims of the scope defined in dependent claims 41, 47, 52 and 55 with the requirements for the interior, intermediate and exterior coil portions to be connected in series, with the exterior and interior portions respectively including terminals for connection to a source of RF.

7. I first became aware of these errors when my attorney reviewed the entire '565 patent for reissue purposes. On information and belief, my attorney became aware of the error when my '565 patent was cited as an anticipatory reference against a pending application owned by my assignee, Lam Research Corporation. The Office Action included a rejection that all features of claims 1-3, 5 and 16 of U.S. Patent Application Serial No. 08/931,503 were found in my '565 patent. The Office Action was mailed by the U.S. Patent and Trademark Office, on November 15, 1999, and received by my attorney on November 16, 1999. My attorney realized that the features of claim 1-3, 5-13 and 16 of the '503 application were included in my '565 patent. My attorney realized that the coverage of the '503 application should have been incorporated in the claims of my '565 patent and received authorization from the Legal Department of Lam Research Corporation to prepare a Reissue Application with appropriate claims to obtain the broader coverage.

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Allan M. Lowe, Reg. No. 19,641; Israel Gopstein, Reg. No. 27,333; Benjamin J. Hauptman, Reg. No. 29,310; Kenneth M. Berner, Reg. No. 37,093; Michael G. Gilman, Reg. No. 19,114 and Randy A. Noranbrock, Reg. No. 42,940, all of Lowe Hauptman Gopstein Gilman & Berner, LLP; and Jeffrey J. Brooks, Reg. No. 35,834 and Marilyn Glaubenskleer, Reg. No. 35,521, both of Lam Research Corporation.

Serial No. 09/534,814

All future correspondence connected therewith should be addressed to the following  
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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